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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/525,767

02/28/2005

Franz-Josef Dietzen

12810-00034-US

9954

30678

7590

08/29/2007

CONNOLLY BOVE LODGE & HUTZ LLP

1875 EYE STREET, N.W.

SUITE 1100

WASHINGTON, DC 20036

EXAMINER

ZEMEL, IRINA SOPHIA

ART UNIT

PAPER NUMBER

1711

MAIL DATE

DELIVERY MODE

08/29/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**Office Action Summary**

Application No.

10/525,767

Applicant(s)

DIETZEN ET AL.

Examiner

Irina S. Zemel

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 27 July 2007.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 103***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1-6, 9-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patents 4,990,542 and 5,317,033 (of record) both to Monani, et al., (hereinafter "Motani '542" and Motani "033") in combination with EP 0915127 to BASf or WO 98/51735 to BASf both of record, (hereinafter "BASF EP" and "BASF WO").

The rejection satnds as per reasons of record. The disclosure of all the cited references is discussed in the previous office action. As discussed in the previous office action, Motani do not disclose palletizing or granulating extruded polymers by cutting of the polymer melt comprising blowing agent downstream of the die at reduced pressure with foaming to give foam beads, however, the step of underwater granulating of expandable polystyrene to obtain beads of desired shape is well known in the art of expanded polystyrene as evident form, for example, both BASF references. Thus, adding of step of underwater palletizing to the process of Motani would have been obvious for the reasons discussed above, i.e., to obtain composition in a desired shape for applications where such shape is needed.

Alternatively, use of the combination of polystyrene with the claimed blowing agent containing water, alcohol and absorber in process of BASF (either Wo or EP) would have been obvious in view of teachings of either one of Motani, as using such

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combined blowing agent mixtures results in improved heat insulating and flexural properties as per expressed teachings of Motani.

It is noted that the claims of the instant application recite "cutting of the polymer melt comprising blowing agent downstream of the die at reduced pressure with foaming to give foam beads", while the BASF references exemplify granulating at pressures of 5 or 10 Bar. However, both of the BASF references expressly state that application of pressure in the granulating step is only desirable to avoid foaming, thus clearly suggesting not applying the elevated pressure if foaming is desirable and foamed particles are desired. See [0018] of BASF EP and page 4 of BASF WO.

Thus, the invention as claimed is still considered to have been obvious from combined teachings of the cited references.

Claims 7-8 and 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Motani '033 or Motani '542 in combination with BASF EP or BASF WO as applied to claims 1-3 above and further in view of US Patent 4,585,825 to Wesselmann, (hereinafter "Wesselmann").

The rejection stands as per reasons of record and in view of discussion above.

### ***Response to Arguments***

Applicant's arguments filed 7-24-2007 have been fully considered but they are not persuasive. The applicant's only argument is that the claimed invention requires step "c" which is defined as "cutting of the polymer melt comprising blowing agent downstream of the die at reduced pressure with foaming to give foam beads", while the

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secondary reference disclose cutting the beads at elevated pressure. It is not clear what translation the applicants refer to in citing the translation of EP reference as no translation of the EP reference is submitted as a part of the record, however, lack of translation on the record is not relevant to the arguments. It is noted and agreed by the Examiner that both BASF references exemplify in illustrative cutting the beads at pressure that exceeds that normal pressure, i.e., BASF WO discloses examples of cutting the pellets in underwater palletized at the pressure of 5 Bar (examples 15-18), and BASF EP discloses an example of cutting the pellets at the pressure of 10 bar (see [0044]). However, first of all, the "reduced" pressure is NOT defined in the instant specification. Thus, this limitation is met by cutting under a pressure which is reduced as compared to any other processing step pressure, for example, is the cutting pressure is reduced as compared to the pressure of the extrusion step or the pressure at the extrusion die. While the references do not specifically address those pressures, it is notoriously known in the art that the extrusion pressures of molten polystyrene (especially containing blowing agent) are quite high and well in excess of 5 bar (10 bar) pressures. Thus, cutting it at the specified pressures does constitute cutting at "reduced pressure". It is further noted that illustrative examples of the instant specification provide examples of cutting at only one pressure, which is normal pressure, thus supporting the examiner's position that the term "reduced" pressure is not defined as "vacuum" or any specific pressure at all and is a relevant term. Furthermore, as discussed above, the BASF references expressly disclose the effect of applying elevated pressures during the granulation of cutting step, thus clearly providing

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motivation to omit this pressure application along with its effect, i.e., when foamed particles are desired to be obtained in the granulator, pressure is not applied. Thus, the invention as claimed would have been obvious from the combined disclosure of the cited references.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Irina S. Zemel whose telephone number is (571)272-0577. The examiner can normally be reached on Monday-Friday 9-5.

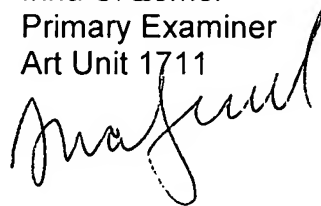
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on (571)272-1078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

ISZ

Irina S. Zemel  
Primary Examiner  
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A handwritten signature in black ink, appearing to read 'Irina S. Zemel', is written over the printed name and title.